

INDESTRUCTIBILITY

GLOWING GREEN



ORIGIN:

- WATERBEARS
(TARDIGRADES)

GENE:

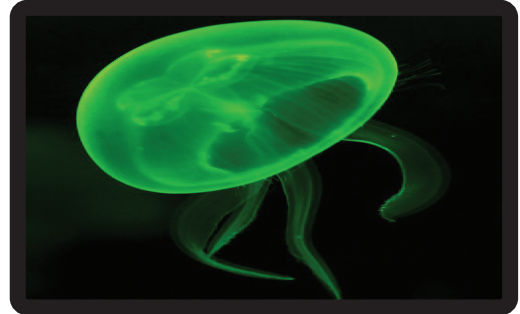
- UNKNOWN

FUNCTION:

- CAN SURVIVE: TEMPERATURES OF 151 °C TO -272 °C, BEING IN OUTER SPACE, AND WITHSTAND DOSES OF RADIATION 1000X HIGHER THAN OTHER ANIMALS

NOTE:

THEY CAN BE FOUND IN YOUR BACKYARD MOSS



ORIGIN:

- CRYSTAL JELLYFISH
(AEQUOREA VICTORIA)

GENE:

- GFP (GREEN FLUORESCENT PROTEIN)

FUNCTION:

- EMITS A GREEN FLUORESCENCE

NOTE:

GFP HAS BEEN INTRODUCED TO A VARIETY OF ANIMALS; MONKEYS, CATS, PIGS, ETC...

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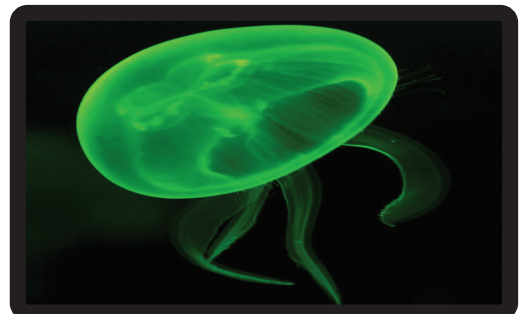
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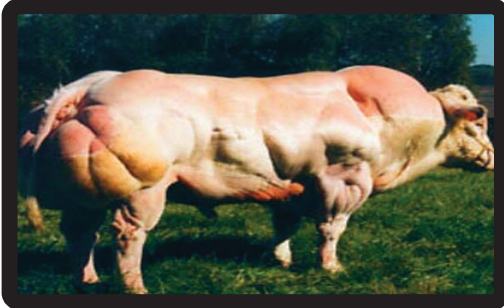
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SUPER STRENGTH



ORIGIN:

- AUROCHS
(*BOS PRIMIGENIUS*)

GENE:

- MUTATED MSTN (MYOSTATIN)

FUNCTION:

- REDUCE THE PRODUCTION OF FUNCTIONAL MYOSTATIN WHICH LEADS TO AN OVERGROWTH OF MUSCLE FIBERS

NOTE:
TWO BREEDS OF COWS HAVE BEEN PURPOSELY BRED WITH MUTATED MSTN LEADING TO "DOUBLE-MUSCLING."

SUPER INTELLIGENCE



ORIGIN:

- HOUSE MOUSE
(*MUS MUSCULUS*)

GENE:

- NR2B
(N-METHYL D-ASPARTATE RECEPTOR SUBTYPE 2B)

FUNCTION:

- OVEREXPRESSION OF NR2B LEADS TO AN INCREASE OF NMDA RECEPTORS WHICH LEADS TO ENHANCED LEARNING AND MEMORY

NOTE:
MODULATING NR2B MAY ALSO TREAT ALZHEIMER'S.

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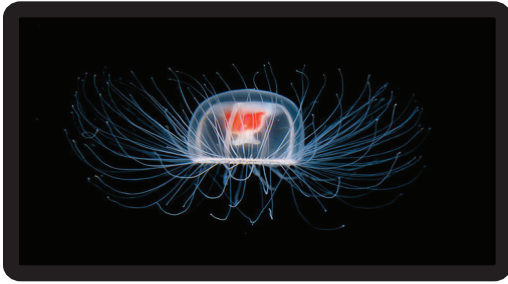
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IMMORTALITY



ORIGIN:

- IMMORTAL JELLYFISH
(TURRITOPSIS DOHRNII)

GENE:

- UNKNOWN

FUNCTION:

- LIVE INDEFINITELY
- RETURN TO FETUS STATE
AFTER FULL LIFE SPAN

NOTE:

INTERESTINGLY, THESE JELLYFISH DIE QUICKLY
IN CAPTIVITY.

ECHOLOCATION



ORIGIN:

- GHOST BAT
(MACRODERMA GIGAS)

GENE:

- PRESTIN: SLC26A5
(SOLUTE CARRIER ANION TRANSPORTER FAMILY 26, MEMBER 5)

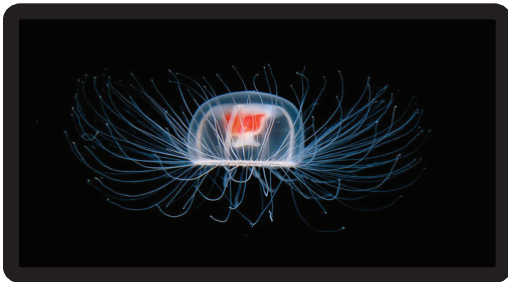
FUNCTION:

- INCREASES SENSITIVITY TO
INCOMING SOUND WAVES
- HEAR HIGHER FREQUENCIES

NOTE:

BATS HEAR FREQUENCIES FROM 14,000 Hz TO
OVER 100,000 Hz.

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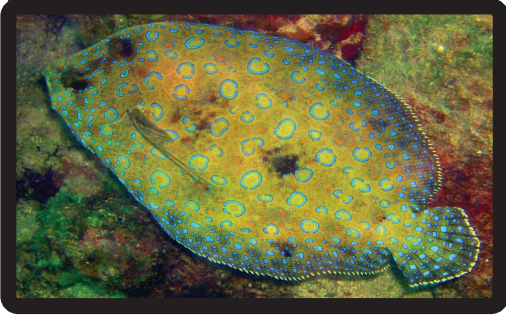
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CAMOUFLAGE



ORIGIN:

- PEACOCK FLOUNDER
(*BOTHUS MANCUS*)

GENE:

- *AGRP* AND *AGRP2*
(*AGOUTI*-RELATED PROTEINS 1 & 2)

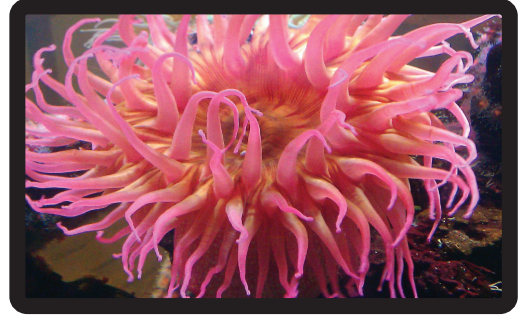
FUNCTION:

- PREVENTS THE MELANOCORTIN RECEPTOR FROM PRODUCING BLACK-BROWN PIGMENT, AND INSTEAD PRODUCES YELLOW-RED PIGMENT; ALSO LIGHTENS PIGMENT HUE

NOTE:

THESE GENES ARE ALSO RESPONSIBLE FOR RED HAIR IN HUMANS

ELASTICITY



ORIGIN:

- SEA ANEMONE
(*ANEMONIA SULCATA*)

GENE:

- MUTATED *FBN1* (FIBRILLIN)

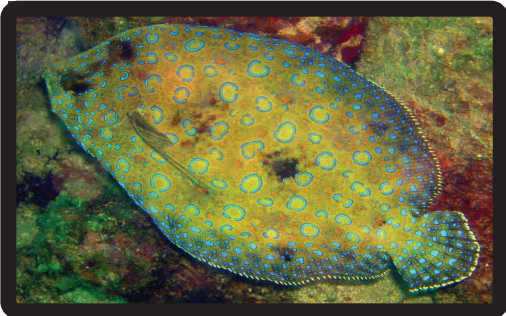
FUNCTION:

- MUTATIONS IN THE *FBN1* GENE DECREASE THE AMOUNT OF FIBRILLIN-1 NEEDED TO FORM MICROFIBRILS WHICH LEADS TO AN OVERGROWTH OF TISSUE

NOTE:

MUTATIONS IN THE *FBN1* GENE CAUSE MARFAN SYNDROME IN HUMANS.

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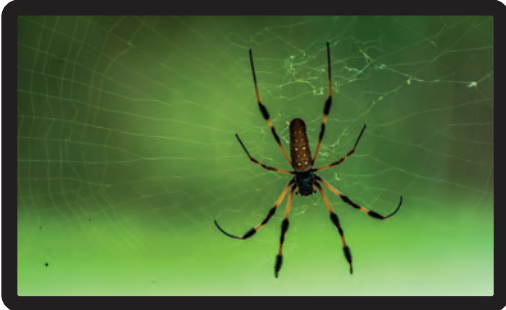
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SPIDER SILK



ORIGIN:

- GOLDEN ORB WEAVER
(*NEPHILA CLAVIPES*)

GENE:

- MASP1 AND MASP2
(MAJOR AMPULLATE DRAGLINE SILK PROTEIN)

FUNCTION:

- PRODUCES PROTEINS THAT FORM
SPIDER SILK

NOTE:
GOATS HAVE BEEN ENGINEERED TO PRODUCE SILK
USING THESE GENES

HEAT RESISTANCE



ORIGIN:

- CHINESE LADDER BRAKE FERN
(*PTERIS VITTATA*)

GENE:

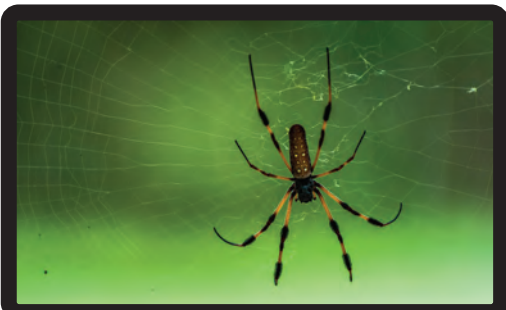
- PYGRX5
(*PTERIS VITTATA* GLUTAREDOXIN 5)

FUNCTION:

- INCREASES PRODUCTION OF BETA-ALANINE AND
VITAMIN B-5 WHICH ALLOWS PLANTS TO SURVIVE
IN HIGH HEAT STRESS

NOTE:
THIS GENE ALSO CONFERS RESISTANCE TO ARSENIC

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GENE:

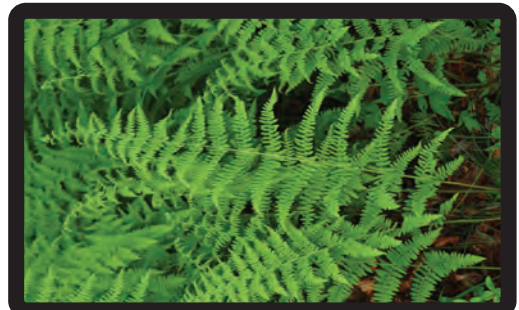
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EAGLE EYE VISION

COLD RESISTANCE



ORIGIN:

- GOLDEN EAGLE
(*AQUILA CHRYSAETOS*)

GENE:

- SWS1
(SHORT-WAVELENGTH SENSITIVE OPSIN 1)

ABILITY:

- PRODUCES OPSINS (LIGHT SENSITIVE RECEPTORS) THAT ARE SENSITIVE TO UV AND BLUE LIGHT

NOTE:
THERE ARE VARIOUS OPSINS THAT RESPOND TO DIFFERENT WAVELENGTHS OF LIGHT



ORIGIN:

- WINTER FLOUNDER
(*PSEUDOPLEURONECTES AMERICANUS*)

GENE:

- AFGP (ANTIFREEZE GLYCOPROTEIN)

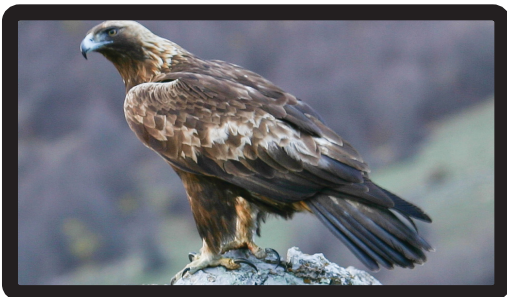
ABILITY:

- BINDS TO AND INHIBIT GROWTH OF ICE CRYSTALS IN BODY FLUIDS

NOTE:
AFGP HAS BEEN USED TO INCREASE CROPS' COLD RESISTANCE

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SHARK TEETH



ORIGIN:

- BULL SHARK
(*CARCHARHINUS LEUCAS*)

GENE:

- INACTIVATED *OSR2*
(PROTEIN ODD-SKIPPED-RELATED 2)

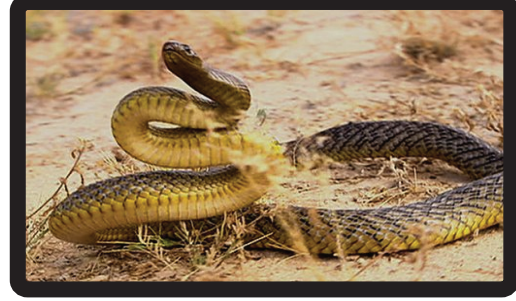
FUNCTION:

- CAUSES MULTIPLE ROWS OF TEETH TO GROW

NOTE:

ALTHOUGH SHARKS HAVE MORE TEETH, THEIR TEETH ARE EQUALLY AS HARD AS A HUMAN'S.

VENOM



ORIGIN:

- INLAND TAIPAN
(*OXYURANUS MICROLEPIDOTUS*)

GENE NAME:

- FACTOR X

FUNCTION:

- PRO-COAGULANT: CAN CLOT VICTIM'S BLOOD IN SECONDS

NOTE:

THE INLAND TAIPAN IS CONSIDERED THE MOST VENOMOUS SNAKE IN THE WORLD, WITH A LETHAL DOSE OF 0.025 MG/KG.

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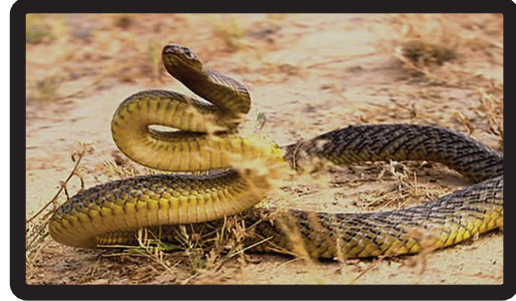
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